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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/502,478	02/11/2000	Kira Sterling Attwood	RSW9-99-129	5209

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CHRISTOPHER & WEISBERG, PA
200 E. LAS OLAS BLVD
SUITE 2040
FT LAUDERDALE, FL 33301

EXAMINER

HO, THOMAS M

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/502,478

Applicant(s)

ATTWOOD ET AL.

Examiner

Thomas M. Ho

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16 are pending.

Prosecution Reopened

2. In view of the appeal brief filed on 6/9/05, PROSECUTION IS HEREBY REOPENED.
A new grounds of rejection in light of newly discovered art found to be more pertinent to Applicant's claims is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131, or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Response to Arguments

3. Applicant's arguments are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 5, 9, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Schuba et al., US patent 6725378.

Schuba et al. (Column 4, lines 53-67) discloses a method of preventing a flooding attack on a network server in which a large number of requests are received for connection to a port number on the server, comprising:

- Determining, in response to a request from a host for a connection to a port number on the server, where the connection to the port is the SYN packet arriving at a port on which a TCP server is listening.,
- if the number of connections to the port assigned to the host exceeds a prescribed threshold, where the TCP discarding all new incoming connection requests when the maximum number of half-open connections are reached is the determination of whether the number of connections assigned to the host exceeds a prescribed threshold.

- , and if so,
- Denying the connection, where the denying of a connection is the “TCP discarding all new incoming connection requests..”

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3, 6-7, 10-11, 14-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Schuba et al., US patent 6725378.

Claims 4, 8, 12, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuba et al., US patent 6725378 and Chebrolu, US patent 6754714, cited in a previous PTO-892.

In reference to claim 2:

Schuba et al. fails to explicitly disclose the method of claim 1 in which denying the request further comprises:

Overriding the denial and allowing the request if a quality of service parameter pertaining to the request host permits the override

Schuba et al. however discloses the refusal of the connections may be overridden if some connections are reset. (Column 6, lines 1-8) and further so in (Column 4, lines 56-60)

Schuba et al. additionally discloses another means by which the denial may be overridden, in the event for which the time for a half open connection expires.

Schuba et al. (Column 4, lines 53-67) suggests that the denial of the request is a result of a quality of service related parameter.

“Moreover, it should be appreciated that without a limit on the number of half open connections, a different denial of service attack would result in which an attacker could request so many connections that the target machine’s memory is completely exhausted by allocating data structures for half open TCP connections.”

“Typically several ports can be flooded in this manner, resulting in degraded service...”

While it is not explicitly stated that the timer is a quality of service parameter, the Examiner notes that the timer controls when the override is released, and is put in place as a quality of service parameter. By allowing certain opened connections to expire after a given amount of time, the timer ensures that internet traffic to the server will not grind to a halt but rather, resume after a given amount of time, ensuring the server may carry out its processing tasks in the interest of quality of service.

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Furthermore, the Examiner notes that Applicant fails to give any substantial detail pointing to any limitation on the definition of this term. In the specification (page 7, last paragraph – page 8, first paragraph), the Applicant has referred to this QoS parameter as such:

“..if the port is not constrained, then a Quality of Service specification that pertains to the requesting host can override the decision to reject the connection. In this case, the request might be allowed at step 206, in which case the parameter A is updated by incrementing it by one. In other words, steps 202, 204 and 206 in conjunction implement a policy that rejects a connection request, unless a QoS policy pertaining to the requester overrides the denial.”

As Applicant has referred to the QoS parameter in the general without providing any explicit definition, the Examiner under MPEP 2111 will take the QoS parameter as any parameter related to quality of service in some manner.

It would have been obvious to one of ordinary skill in the art at the time of invention to override the denial and allow the request if a quality of service parameter permits to override, in order to allow legitimate connections to continue to maintain the quality of the network service offered by the server.

In reference to claim 3:

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Schuba et al. (Column 4, lines 53-67) discloses the method of claim 2, wherein a connection request is denied in any event if the number of available connections to the port are less than a constrained threshold, where the constrained threshold is one, and the number of available connections are less than that when it is such that all available connections have been utilized, ie, the limit of the connections on that port has been reached.

In reference to claim 4:

Schuba et al. fails to explicitly disclose the method of claim 1 or claim 2 or claim 3 further comprising:

Calculating the prescribed threshold by multiplying a percentage P by the number of available connections remaining for the port. Usage of percentages inherently involve multiplication of that percentage against a solid number to grant any significant meaning to the statistic.

Chebrolu, US patent 6754714 (Column 4, lines 40 – Column 5, line 24) discloses several figures including “50% of the total bandwidth” or an allocated channel or port at 60%, which is equivalent to 50% of the number of available connections of the port.

Chebrolu (Column 5, lines 30-37) also discloses calculating the prescribed threshold by multiplying a percentage P by the number of available connections remaining for the port, where the percentage P of the number of available connections is expressed in the mathematically equivalent form of a ratio.

It would have been obvious to one of ordinary skill in the art at the time of invention to calculate the prescribed threshold by multiplying a percentage P by the number of available connections remaining for the port in order to express the threshold as a convenient and easily understood quantity.

Claims 6-8, 10-12, 14-16 are substantially similar to claims 2-4 and are rejected for the same reasons.

Conclusion

8. Any inquiry concerning this communication from the examiner should be directed to Thomas M Ho whose telephone number is (571)272-3835. The examiner can normally be reached on M-F from 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (571)272-3838.

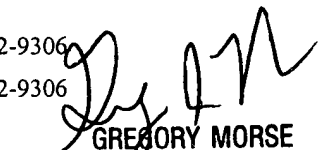
The Examiner may also be reached through email through Thomas.Ho6@uspto.gov

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

General Information/Receptionist
Customer Service Representative

Telephone: 571-272-2100
Telephone: 571-272-2100

Fax: 703-872-9306
Fax: 703-872-9306


GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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TMH

September 5th, 2005